

Investor's Manual

Bioenergy

New investment models could help reverse decline of local ownership of biofuel plants



By David S. Chesnick
Agricultural Economist
USDA Rural Development
david.chesnick@wdc.usda.gov

Editor's note: This article presents findings of Informa Economics, a consulting firm headquartered in Memphis, Tenn. The article does not reflect any official position of the U.S. Department of Agriculture or of any other government entity.



little more than one-third of ethanol-industry capacity was owned by farmers and other local investors in early 2007, according to the Renewable Fuels Association. However, only 15 percent of new or expanding biofuel plant construction is owned by such investors. A key reason for this shift is that the larger plants being built today require larger amounts of equity.

Equity investment at this scale can

be difficult to obtain from farmers and other rural investors living in close proximity to a proposed facility. But if local investment wanes, so does the flow of returns from biofuel to the communities where it is produced.

Based on the analysis conducted by Informa and interviews carried out during the course of this project, Informa formulated several investment models that may be used to facilitate investment by farmers and other rural residents in the renewable energy



USDA photo by Dan Campbell

“If local investment wanes, so does the flow of returns from biofuel to the communities where it is produced.”

sector. This article briefly describes each of these models.

Closed-end renewable energy fund

With a closed-end renewable energy fund, investment is limited to farmers and other rural residents seeking to invest in energy projects. Such funds would be managed by professionals or institutions. These funds will need to be large enough to invest across multiple facilities. For example, a \$300 million

capitalization fund could own almost all the equity in three 100-million-gallon-per-year ethanol facilities.

While it is uncertain how much money farmers and other rural investors would be willing to invest in such a fund, some parameters can be placed

around potential contributions. Through interviews, Informa calculated that the per-person investments by farmers and other rural investors tend to be small, in relative terms, generally around \$10,000 to \$50,000. Given the resources of farmers, Informa believes farmers with gross sales of more than \$100,000, a mean net worth of at least \$1 million and a debt-coverage ratio of at least \$50,000 would be the most likely candidates for participation in a renewable energy fund.

Nearly 300,000 farms fall into the financial categories just described. If each farmer were to invest at least \$10,000, the fund would attract \$3 billion. New ethanol plants typically cost \$1.95 per gallon of capacity. Typically, they are built using 40 percent equity and 60 percent debt. This would be sufficient to provide equity for more than 3.5 billion gallons of ethanol.

Debenture guarantees

The debenture guarantee model, according to Informa's analysis, would be similar to the Rural Business Investment Program (RBIP), created in the 2002 Farm Bill and administered by the Small Business Administration. Under this program, Rural Business Investment Companies (RBICs) are established and allowed to issue debenture guarantees. The debentures issued by an RBIC are pooled with other issues and sold to outside investors.

The debentures are backed by the federal government and would carry lower premiums. Informa proposes that a similar program could be used for biofuel investment projects. The modifications of the RBIP program to facilitate an RBIC program would be as follows:

- Because a relatively large amount of total capital is required to finance construction of a new ethanol plant (around \$185 million for a 100-million-gallon facility) the maximum, \$6 million-net-worth restrictions of the existing program would be relaxed.
- Debenture pre-payment requirements for dividends may need to be relaxed in order to generate more cash flow to equity holders.
- Leverage fees for debentures would have to be significantly lower to be competitive against market interest rates.

Despite the current drop in the market price for ethanol, ethanol stake holders enjoyed short debt-payback periods for those that entered the market early. Thus, the debt market did



The ribbon-cutting in 2002 for the Glacial Lakes Energy ethanol plant in South Dakota.

not demand a high risk premium from ethanol producers. Furthermore, ethanol plants with a higher probability of financial success are able to secure adequate debt financing in the market, Informa found.

New Markets Tax Credit

A third investment model is based on the New Markets Tax Credit (NMTC). The NMTC program is funded and managed by the U.S. Treasury Department's Community Development Financial Institutions (CDFI) program. The Models for Funneling Local Investment Capital into Biofuel Production program permits taxpayers to receive a credit against federal income taxes for making qualified equity investments in designated Community Development Entities (CDEs).

These CDEs could invest in biofuel facilities and could supplement the farmers' equity, thereby leveraging the initial farmer investment. Some modifications would be needed for the biofuel sector, such as:

- The CDE would pledge to invest in a portfolio of qualified biofuel projects;
- Create a new tax credit model that will mirror the investment mechanism of the New Markets Tax Credit, but target it specifically for biofuels and renewable industry investment.

The New Markets Tax Credit could become a model to help finance a few farmer-owned biofuels facilities. The federal tax credit provides a subsidy that, if structured correctly, can provide some economical incentives for investors to finance farmer-owned operations.

Tax credit for projects with minimal rural involvement

Research by Informa indicated that farmer groups and rural residents can raise \$5 million to \$10 million from a limited number of investors in a short period of time. However, moving beyond this has proven difficult for many groups. To expand this group would incur a high cost. Therefore, another proposal would be to use tax credits for outside investors to help farmers finance biofuel facilities.

This program would require an outside investor to match the farmers' investment in exchange for the project's tax credit. Informa says this is similar to the Production Tax Credit for wind-generated electricity. In order for the investors to gain the tax credit, they would need to maintain a minimum of perhaps 25 percent farmer ownership. Using project tax credits for a minimum share of farmer or rural involvement is potentially a viable mechanism to maintain or increase the farmer participation in the biofuels sector.

No new investment models?

Informa noted that some interviewees objected to any program that the government would create for investment in renewable energy. They indicated that there already are substantial amounts of equity flowing into renewable fuel projects. They stated that farmer-investors can buy shares in any of the several publicly traded ethanol companies.

While farmers can use this approach to invest in ethanol, this would not accomplish the objective of stanching the trend of rural investors owning a receding share of renewable fuel-production capacity. This also would keep the returns from biofuels from recirculating within the rural community and thus stimulating further economic growth within that rural community. ■